2016 2nd International Conference on Industrial Engineering, Applications and Manufacturing, ICIEAM 2016 - Proceedings, 2017

The performance matrix of the contact switch of the measuring signals

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Abstract

© 2016 IEEE.Detailed analysis of transients when switching channels of switch contact held and dependences of mutual influence of channels on the signal frequency parasitic capacitance and conductance of the active component of open switch channels is introduced. Recommendations on magneto controllable contacts matrix management providing the required level of reliability, performance and accuracy of measurement automation object parameters are given. The data on experimental verification and implementation of matrix contact switches at using reed switches are provided. Variations of design versions of matrices with reed switches meet different requirements for speed and efficiency: two and three coordinate independent groups managing the tires; without bias currents; with bias currents; passive and active contact opening. The components of the overall performance of the matrix-switching unit and evaluating of each constituent element of the switching process are given. The prospects of further improvement of the matrix of contact switches are depicted.

http://dx.doi.org/10.1109/ICIEAM.2016.7911722

Keywords

contact, matrix control, measuring signal, reed switch, reliability, switching

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